

Striking A Balance ...

For a Healthy



Community



Economy



Environment

**Brunswick/Glynn County
Community Based
Environmental Protection
Project Summary Report**
(Covering Activity from August 1995
through March 1999)



EPA



FDEP



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Introduction

In August 1995, the U.S. Environmental Protection Agency (EPA), in cooperation with the Georgia Department of Natural Resources, Environmental Protection Division (EPD), launched a special project called the Brunswick/Glynn County Community Based Environmental Protection Project, or Brunswick CBEP for short. This report summarizes project results.

The CBEP project was part of a new EPA approach to long-term environmental protection, an approach that emphasizes community involvement in the protection of natural resources. EPA and EPD took samples of the water, soil, sediments, and animal life in the Brunswick/Glynn County area and gathered other information to assess the area's overall environmental quality. From the beginning, community members contributed to the goals and direction of the project. Sampling and inspection activities to assess environmental quality took place between August 1995 and September 1997.

CBEP project results provide a "snapshot" of environmental conditions as they existed when the project investigation was undertaken. Overall, CBEP project results indicate the environmental picture in Brunswick is good, with significant areas of contamination being cleaned up.

EPA and EPD encourage you to use the information gathered during this project to strike a balance for a healthy environment, economy, and community.

Photographs provided by the Georgia Department of Natural Resources, the Georgia Department of Industry, Trade, and Tourism, and the National Space Science Data Center, Dr. Frederick J. Doyle, Principal Investigator.

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CBEP is a holistic approach to environmental protection that is sensitive to local conditions and employs multi-level, cross-sector partnerships to achieve results. It supplements, rather than replaces, EPA's existing media-specific and statutory programs.

CBEP Stakeholders

Area Citizens
City of Brunswick, GA
Glynn County, GA
Glynn County Health Department
Glynn Environmental Coalition, Inc.
Save The People Association, Inc.
U.S. Fish & Wildlife Service (USFWS)
National Oceanic and Atmospheric Administration (NOAA)
Agency for Toxic Substances and Disease Registry (ATSDR)
Georgia Department of Natural Resources -
Environmental Protection Division (EPD)
U.S. Environmental Protection Agency (EPA)

Stakeholder contributions include review of the project workplan, identification of sampling locations and the securing of access to those locations, health monitoring assistance, and participation in planning the open house and progress report meeting held May 28, 1997.

CBEP Goals

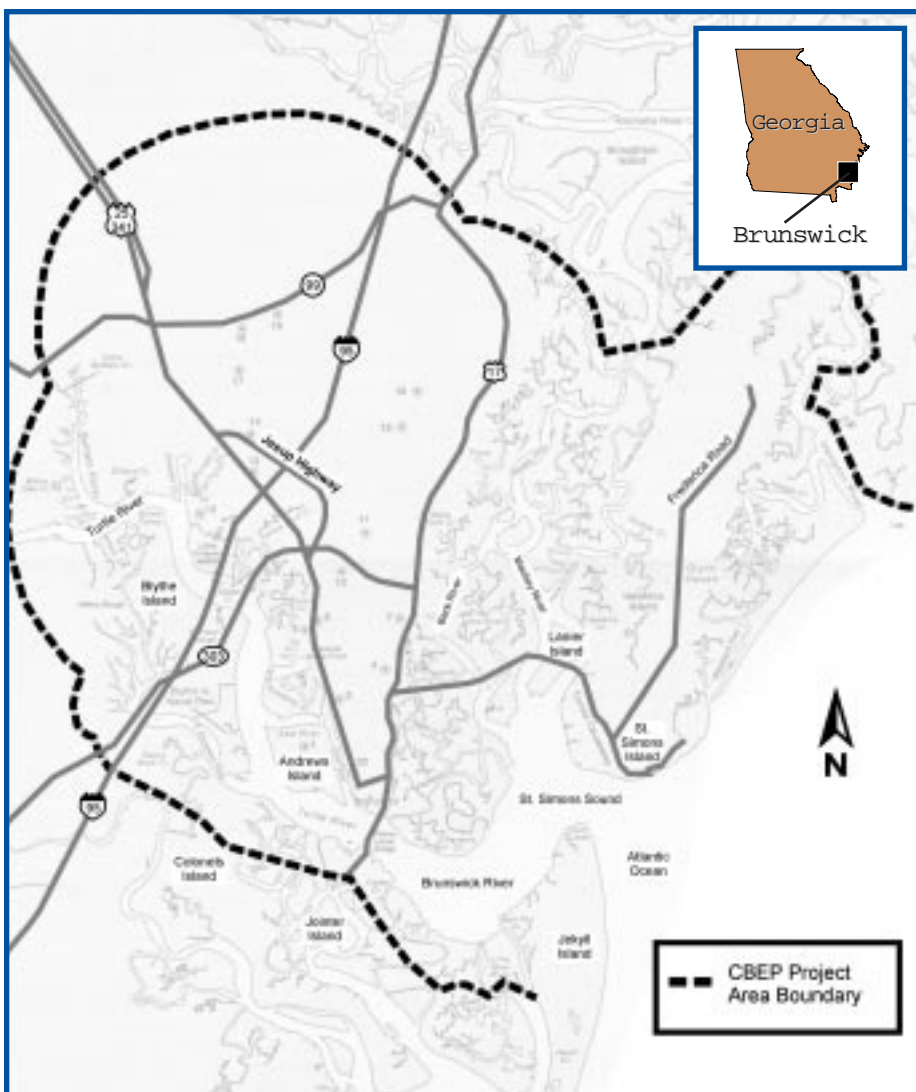
- 1. Assess environmental problems from present and past activities.**
- 2. Develop a partnership among federal, state, and local environmental agencies for environmental management throughout the project; coordinate with other federal, state, and local agencies to attain information during appropriate phases of the project.**
- 3. Keep the Brunswick/Glynn County community informed of the planning and implementation process and seek their cooperation and participation wherever appropriate.**
- 4. Use a combination of regulatory and non-regulatory strategies to respond to any identified environmental problem.**



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Community

The Brunswick/Glynn County area is one of Georgia's most scenic locations. It is about 75 miles south of Savannah, and about 65 miles north of Jacksonville, Florida. The city of Brunswick is located on the mainland; east of the city are the Golden Isles of Georgia: St. Simon's Island, Sea Island, Jekyll Island, and Little St. Simon's Island. Approximately 70,000 people live in Glynn County; 17,000 of whom reside in Brunswick.



The project area covers more than 100 square miles, including the city of Brunswick, St. Simon's Island, Blythe Island, and Andrew's Island.





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Economy

Tourism is the area's number one industry. More than 1.5 million visitors come each year to enjoy fishing, golf, bicycling, and other outdoor activities in this coastal community setting. Other important economic resources in the community include pulp and wood products, chemical manufacturing, the Glynn County Board of Education, and the Federal Law Enforcement Training Center.

Brunswick also has a commercial fishing port with a thriving seafood industry. In addition, local residents and tourists enjoy fishing in area rivers and creeks.



Environment

The area's tidal marshes are not only vital, they are an invaluable natural resource, providing a home for an array of plants and animals and feeding and breeding grounds for many others. In the marshes, highly efficient food production takes place as minerals from the land and the sea are converted into nutrients for other plants and animals.

Several endangered species live in the marshes around Brunswick: the West Indian Manatee, the Wood Stork, the Atlantic Hawksbill Turtle, the Atlantic Ridley Turtle, and the Leatherback Sea Turtle. The abundance of life in the marshes attracts wildlife and recreational enthusiasts.

The marshes also act as a buffer, protecting populated areas from the force of tides and storms.

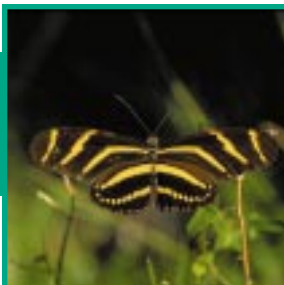
CBEP History

On August 10, 1995, a public meeting was held for the Brunswick/Glynn County CBEP project. EPA received comments from the community and government agencies on the draft project work plan. These comments were incorporated into the revised work plan, and the CBEP project was expanded to include St. Simon's Island and part of Colonel's Island.

The Brunswick area has three properties on the National Priorities List (also known as the NPL or Superfund list): the LCP Chemicals Plant (LCP) site, Brunswick (Escambia) Wood Preserving site, and Hercules 009 Landfill site. One other area, the Terry Creek Dredge Spoils site, has been proposed to the NPL. One CBEP project goal was to determine whether these sites were affecting people and animals in the area.

Water, air, soil, and fish sampling and inspections of regulated facilities in the Brunswick CBEP project area were completed by September 1997. Information collected in the study was analyzed for hazardous substances, such as metals, organic compounds, and pesticides. After results were reviewed and analyzed by EPA and EPD, all information was distributed to the community.





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CBEP Project Results

All soil, water, air, and fish samples taken were analyzed for metals, organic compounds, and pesticide/PCB compounds, and all results were compared to safe levels according to federal and state guidelines.

Private and Municipal Wells

Most Brunswick residents receive water from municipal wells; however, some households use water from private wells. In May 1995, May 1996, and September/December 1996, EPA sampled drinking water from all municipal wells serving the CBEP project area, in addition to several private wells in the area. All wells but one met federal and state drinking water standards. The only exception is currently an unused private well near the Brunswick Wood Preserving site, which exceeded the removal action level for lead; however, the lead level found is believed to be associated with the well itself and not the site.



Schools and Parks

EPA and EPD sampled soils at elementary and middle schools in the CBEP project area. Only trace amounts of contamination were found in these soils. The trace amounts were below federal and state safe guidelines; therefore, soils at school playgrounds and parks do not

pose any known health concern to children or adults. The Agency for Toxic Substances and Disease Registry (ATSDR) also reviewed the school and park sample results and determined the soils do not pose a public health concern.

Schools sampled for soil contamination included Glynn Academy, Jane Macon Middle School, Risley Middle School, Risley Learning Center, Altama Elementary, Ballard Elementary, Borroughs-Mollette Elementary, Glyndale Elementary, Golden Isles Elementary, Goodyear Elementary, Greer Elementary, Oglethorpe Elementary, S. Simons Elementary, and Glynn Middle School.

Parks sampled for soil contamination include Howard Coffin Park, Dixville Park, Urbana Park, Seldon Park, Arco Field, Palmetto Park, Orange Park, Perry Park, Goodyear Park, and Ballard Park.

Air

Georgia EPD monitored the ambient (or surrounding) air quality in the Brunswick/Glynn County area in March and April 1996. Six ambient air quality monitoring stations were located within the CBEP project area; air quality and meteorological data were collected. EPA provided support with mercury monitoring. About 70 air samples were analyzed for several classes of air pollutants; 23 chemicals were detected. Of the chemicals detected, all except the chemicals acrolein and mercury were within ranges routinely reported in urban areas and below health based screening values.

Mercury was detected at concentrations or levels higher than the screening values used in the study on four days during the CBEP project near the LCP Superfund site due to site cleanup activities. Although exposure to high amounts of mercury or



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long-term exposure has been linked to various health effects, the amounts of mercury measured in this study were neither high enough nor present long enough to likely cause problems. Additional mercury monitoring by the EPA, after the LCP site removal activities were completed, indicated that mercury concentrations returned to background levels and were below screening values.

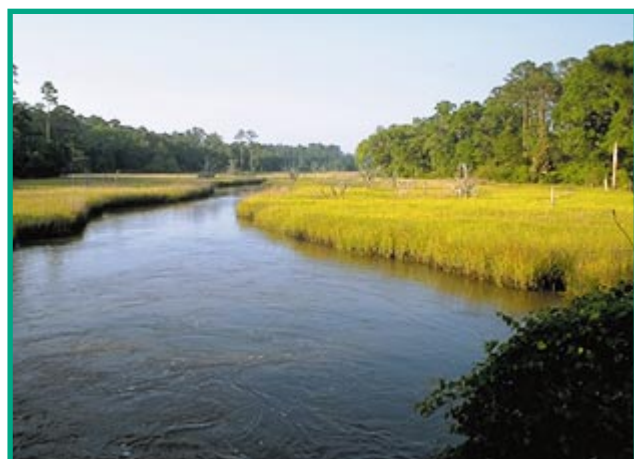
On two days of the CBEP project, acrolein exceeded screening values. Acrolein is common in the air in urban areas. It is found in automobile exhaust and industrial emissions, often at the concentrations detected in Brunswick during the CBEP project. Exposure to acrolein, in the concentrations measured during the CBEP project, may potentially cause eye and respiratory irritation. To date, no industrial source of acrolein has been identified, but EPA continues to evaluate potential sources.

An ambient air monitoring station located on the Coastal Georgia Community College campus was used during the CBEP project. It continues to sample for ambient air toxics once every 12 days throughout the year. Information gathered from this air monitoring station in Brunswick and information from other air monitoring stations throughout the State of Georgia will be used to develop a better understanding of air quality in Brunswick. Air monitoring information will be reported annually in EPA's Ambient Air Surveillance Report.

Fish

EPA and EPA collected tissue samples from fish, shrimp, and crabs during the Brunswick CBEP project. Tissue samples were checked for contamination.

On April 8, 1996, the EPA and the Coastal Resource Division held a press conference to inform the public of fish consumption guidelines for the area. Contaminated fish were found in Purvis Creek, Gibson Creek, and sections of the Turtle and Buffalo Rivers. Trace amounts of contamination were found in fish, shrimp, and crabs in the Dupree and Terry Creek areas. Some fish contamination is believed to be from the LCP Chemical Plant site and the Terry Creek Dredge Spoils site, both of which are being cleaned up under EPA direction.



Marsh and Surface Waters

In December 1995 and April 1996, EPA took sediment and surface water samples in rivers and adjacent tidal creeks and marsh areas surrounding Brunswick, including the Turtle, Brunswick, South Brunswick, East, Back, Frederica, and MacKay Rivers. As expected, high concentrations of contamination were found in areas near the LCP Chemical Plant site and the Terry Creek Dredge Spoils site. Trace amounts of contamination were found in other areas, but these amounts were at levels considered to be safe. Based on sampling results, marsh areas, outside of those near known contaminated sites, do not pose a health threat to the community.



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Soil: Residential Areas of Brunswick

EPA and EPD collected a total of 185 soil samples from the residential areas in Brunswick. Toxaphene, which is the main pesticide of concern to the community, was not detected in 83 percent (154 soil samples) of the total number of soil samples collected. Toxicologists from the EPA and the EPD and environmental health scientists from ATSDR have reviewed all analytical data for all contaminants analyzed in the 185 soil samples collected from the residential areas. These experts have determined that the contaminants in the soil samples are below health based screening values and are not at levels of public health concern.

EPA collected 30 of the 185 soil samples from residential properties near suspected contamination sources in December 1996. Sample locations were arbitrarily selected between known sources of contamination and schools and parks that had already been sampled. Although a small number of samples may not be adequate to characterize the nature and extent of contamination, the data help identify areas that may require further investigation.

EPD provided additional residential soil sampling in an area from Fourth Street to the south end of Brunswick in April 1997. Unlike EPA, EPD collected the remaining 155 soil samples in a grid pattern to provide uniform coverage with the understanding that the data could provide information on any unsuspected trends in soil contamination. After the samples were collected, they were analyzed for pesticide/ PCB compounds with an emphasis on toxaphene.

State Regulated Facilities

As part of the Brunswick CBEP project, EPD and EPA inspected known regulated facilities that discharge into surface waters (creeks, rivers, lakes, etc.) of the State. Companies that discharge into State waters

are required to have an National Pollutant Discharge Elimination System (NPDES) permit. An NPDES permit allows a facility to discharge clean water or water with small amounts of contamination from an outfall or storm water drain. Plant personnel were counseled on ways to improve storm water control and reduce runoff.

EPD also inspected hazardous waste generators; hazardous waste treatment, storage, and disposal facilities; solid waste landfills; and toxic release inventory listed facilities in the CBEP area. EPD also conducted file audits to determine the compliance status of public water supply systems and underground storage tanks.



During the week of March 11, 1996, EPD conducted multi-media inspections (inspections covering many environmental regulations) on four facilities known to be of concern to the public: Hercules, Inc.; Georgia Pacific; SCM Glidco Organics; and Allied Universal Corp. The SCM Glidco Organics multi-media inspection was jointly conducted with EPA in 1996. Another multi-media inspection was jointly conducted at Hercules, Inc., in 1997. EPD fined Hercules, Inc., for violations of the Resource Conservation and Recovery Act (RCRA). EPA and EPD continue to inspect facilities in Brunswick/Glynn County.



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Community Areas of Concern

Community members have expressed concerns to EPA and EPD about 20 sites within the Brunswick CBEP project area. 19 of these sites are listed in EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS). Twelve of these 19 sites are also listed in EPD's Hazardous Site Inventory (HSI). The CERCLIS list is an inventory of the sites that EPA has assessed. Some CERCLIS sites have required additional assessment and work under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) law, also called the "Superfund" law.

Three sites in Glynn County are listed on EPA's National Priorities List (NPL). Another site in Glynn County has been proposed to be listed on the NPL as a result of the CBEP project. NPL sites are often

referred to as "Superfund" sites. The NPL sites in Glynn County are **LCP Chemicals-Georgia**, **Hercules 009 Landfill**, and **Brunswick (Escambia) Wood Preserving**. A fourth site, the Terry Creek Dredge Spoil Area, is proposed to the NPL.



CBEP Information Centers

EPA and EPD have placed CBEP project reports and other related information in the following locations:

St. Simons Library
530 A Beachview Drive
St. Simons Island

Save the People, Inc.
1401 Monck Street
Brunswick

**Brunswick-Glynn
County Library**
208 Gloucester Street
Brunswick

**GA Department
of Natural Resources**
SE Georgia
Regional Office
1 Conservation Way
Brunswick



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NPL Sites

LCP Chemicals-Georgia

Approximately 200,000 cubic yards of contaminated soils and sediments have been removed from the LCP site. 355 tons of scrap metal were recycled; and 132,305 tons of hazardous waste and 120,355 tons of hazardous solid waste were shipped off site. By the end of April 1999, a large portion of the contamination will have been removed from the site. EPA is also reviewing the technological options available to clean up the contaminated groundwater below the site.

Brunswick Wood Preserving

In late 1996, EPD removed about 151,000 tons of contaminated sludge and soil from three waste cells, which EPA built on site. EPD and EPA spent about \$18.5 million and \$9 million, respectively. At present, EPA is assessing the extent of site contamination and reviewing technological options for completion of site cleanup, which will probably start in the year 2000.

Hercules 009 Landfill

Contaminated sludge and soil have been "solidified and stabilized." Clean soil has been placed over the landfill to provide additional protection to the public and the environment from contaminant releases. EPA completed these actions in March 1999. Groundwater monitoring near the landfill will continue for many years to make sure contamination is not dispersed.

Proposed NPL Site

Terry Creek Dredge Spoil Area

Soil and sediment samples collected for the CBEP project in September 1995 and February 1996 at the site had high levels of toxaphene. These results prompted EPA to propose the site to the NPL in April 1997.

Although the site is not officially listed on the NPL, EPA has removed contaminated sediments from the outfall connected to the Hercules, Inc., facility. At present, EPA is preparing to remove about 40,000 cubic yards of contaminated sediment from the outfall, Dupree Creek, and Terry Creek. This removal action is expected to begin in May 1999. EPA is also evaluating methods to clean up the contaminated dredged sediments, which form small islands in the area.

CERCLIS/HSI Sites

Other CERCLIS/HSI sites in Glynn County were assessed during the CBEP project. Following is a brief status report on each site. HSI sites are noted by an asterisk*.

Andrews Island Dredge Spoils Area

EPD conducted a site inspection during the week of April 1, 1996, and wrote a Site Inspection Report. Under Superfund law, this site has been designated No Further Remedial Action Planned.

* Brunswick Light & Water Company Coal Gasification Site (a.k.a. Atlanta Gas Light) EPD performed a Preliminary Assessment on July 20, 1995, and a Site Inspection on May 2, 1996, which led to the removal of part of the contamination. The removal was completed in December 1997. EPD issued an Administrative Order, directing the company to prepare a corrective action plan for further cleanup actions at the site.

Cate Road Landfill

EPA assessed this site during the CBEP project. Based on the information gathered, the site is not an immediate threat to the public or the environment.



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* Chemresol, Inc.

The site was assessed by EPA during the CBEP project, and based on the information gathered, it is not an immediate threat to the public or the environment.

General Electric Co.

EPA assessed the site during the CBEP project. Under Superfund law, this site has been designated No Further Remedial Action Planned.

Georgia Creosoting Co.

EPD completed a Preliminary Assessment on December 29, 1995. Based on the information gathered, the site is not an immediate threat to the public or the environment.

* Georgia Power Co. - McManus Steam

The site was assessed during the CBEP project, in accordance with Superfund law. Under Superfund law, this site has been designated No Further Remedial Action Planned. This is an active facility that is subject to other federal and state environmental laws.

Georgia Power Co. - Proposed Station

EPA assessed this site, which is on the LCP site, during the CBEP project. This site was remediated as part of the soil removal activities at the LCP site.

* Hercules, Inc.

This site was inspected during the CBEP project. This is an active facility that is subject to federal and state environmental laws. Recently, EPD fined the facility for violations of the Resource Conservation and Recovery Act (RCRA) and issued a corrective action permit.

* Old Sterling Landfill

This site was assessed by EPA during the CBEP project, in accordance with Superfund law. Under Superfund law, this site has been designated No Further Remedial Action Planned.

New Sterling Landfill

EPA assessed this site during the CBEP project, in accordance with Superfund law. Under Superfund law, this site has been designated No Further Remedial Action Planned.

* O'Brien Corporation

This site was assessed by EPA during the CBEP project. Based on the information gathered, this site is not an immediate threat to the public or the environment.

* T-Street Dump

EPA conducted an Expanded Site Inspection in September 1995 and February 1996, in accordance with Superfund law. Based on the information gathered, this site is not an immediate threat to the public or the environment.

4th Street Landfill

EPA conducted an Expanded Site Inspection in September 1995, in accordance with Superfund law. Based on the information gathered, this site is not an immediate threat to the public or the environment.

* Harbison Walker Refractory Calsilite

This site was assessed by EPA during the CBEP project, in accordance with Superfund law. Under Superfund law, this site has been designated No Further Remedial Action Planned.

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